
Blue Economic Concept on Protecting Marine Ecosystem in Indonesia and China

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ABSTRACT

The concept of the Blue Economy is an economic principle for sustainable development, which was first introduced at the United Nations Conference on Sustainable Development in 2012, for Southeast Asian countries was also introduced at the APEC Summit held in 2013. This concept is expected to be able to solve the problems of marine ecosystems caused by marine based economic activities, such as the problem of overfishing since 2017, the problem of marine debris both from land and waste from economic activities at sea – garbage mining and marine tourism. Indonesia's marine based economy without a doubt have potential to be improved, and has to be in line with protecting and preserving the environment and the ecosystem with this concept. One of the countries that has regulated this concept and succeeded in increasing its marine based economy is the People's Republic of China (PR China). This journal uses normative methods and comparative studies to find out the how both countries regulate the protection of marine ecosystems while maximizing the use of it as part of economic activities, and what lesson Indonesia can learn from PR China in its maritime regulations to encourage the improvement of marine based economic income.

Keywords: blue economy, sustainable development, marine ecosystems, marine environment, preserving the environment.

INTISARI

Konsep ekonomi biru merupakan prinsip ekonomi untuk pembangunan berkelanjutan, yang pertama kali diperkenalkan pada Konferensi PBB tentang Pembangunan Berkelanjutan pada tahun 2012, untuk negara-negara Asia Tenggara juga diperkenalkan pada KTT APEC yang diadakan pada tahun 2013. Konsep ini diharapkan dapat mampu mengatasi permasalahan ekosistem laut yang diakibatkan oleh kegiatan ekonomi berbasis kelautan, seperti masalah overfishing sejak tahun 2017, masalah sampah laut baik dari darat maupun limbah dari kegiatan ekonomi di laut – penambangan sampah dan wisata bahari. Perekonomian Indonesia yang berbasis kelautan tidak diragukan lagi memiliki potensi untuk ditingkatkan, namun tetap sejalan dengan menjaga dan melestarikan lingkungan dengan konsep ini. Salah satu negara yang telah mengatur konsep ini dan berhasil meningkatkan ekonomi berbasis kelautannya adalah Republik Rakyat China (PR China). Jurnal ini menggunakan metode normatif dan studi banding untuk mengetahui bagaimana kedua negara mengatur perlindungan ekosistem laut sekaligus memaksimalkan pemanfaatannya sebagai bagian dari kegiatan ekonomi, dan pelajaran apa yang

dapat diambil Indonesia dari PR China dalam regulasi maritimnya untuk mendorong peningkatan pendapatan ekonomi berbasis kelautan.

Kata kunci: ekonomi biru, pembangunan berkelanjutan, ekosistem laut, lingkungan laut, melestarikan lingkungan.

INTRODUCTION

Our planet earth consists mostly of water as two thirds of our earth surface or 72% (seventy two percent) of it are ocean.¹ With this large portion of ocean's area, it cannot be denied how it has many potential – one of it is endless marine based economy activities. With many natural resources that can be processed for businesses, this gives opportunity for new fields of jobs and help improving one country's economy, especially for Indonesia as one of the maritime country in the world. Indonesia has be named to be the second largest country in Asia, and as well as the largest archipelagic country in the world with a total of 71% (seventy one percent) ocean's area.² Because our country are mostly consisted of water, this became the reason why our island is being separated from island to island.

According to the Commonwealth website,³ about 350 jobs in the world are mainly based or linked with fisheries, this include not only fellow fisherman, but also import and export activities of ocean natural resources, and any other examples. Further, they said aquaculture or cultivation of marine resources has become the most used development in the world in the sector of fish processing, also not forgetting how our goods mostly 80% (eighty percent) are shipped through the sea around the world. It can be seen how marine resources provide enormous economic potential for improving the income, especially for Indonesia. Indonesia government since couple years ago has been aware of Indonesia marine resources and the potential of ocean they owned, therefore, Indonesia has always tried to be active on improving sectors economic activities based on ocean.

Some examples are in the fisheries sectors, aquaculture, ocean mining's, and tourism. In 2021 alone, it has been said the are some potential economic value that can be possible to obtained from the maritime sectors that can certainly reach US\$ 1,500,000,000,000.00 (one million five hundred trillion dollars) Gross Domestic Product (GDP's) and provide potential employment for

¹“How Much Water is There on Earth” (UGSC, 2018) <https://www.usgs.gov/special-topic/water-science-school/science/how-much-water-there-earth?qt-science_center_objects=0#qt-science_center_objects>> accessed May 25, 2021.

² “Susi: Kita Konsen ke Darat Dalam 7 Dekade Padahal 71% wilayah kita lautan” <https://megapolitan.kompas.com/read/2018/08/13/19543741/susi-kita-konsen-ke-darat-dalam-7-dekade-padahal-71-persen-wilayah-kita> accessed May 25, 2021.

³“Blue Economy” (The Commonwealth, 2021) <<https://www.google.com/search?q=is+indonesia+the+largest+maritime+country&oq=is+indonesia+the+largest+maritime+country&aqs=chrome..69i57j33i10i160l2.6152j0j9&sourceid=chrome&ie=UTF-8>> accessed May 25, 2021.

around 45,000,000 (forty five million) people, this a cumulative data from previous years.⁴ But this can only happen if Indonesia can maximize the use of ocean based economic – since in fact Indonesia has only utilized about 25% of the marine potential.⁵ This is devastating since in real practice, from the total wide are of Indonesia sea's reached up to 70%, Indonesia's income to GDP is still below 25%.⁶ Even though Indonesia's marine economy is also being actively carried out from time to time, apart from it is still not being able to increase the economy, business actors are also still lacking in awareness of preserving the environment in marine resource management.

Some of the main problems in the maritime economic among others, are the problem of overfishing or excessive fishing activities without the life of marine fauna and flora. An example of real case practice of overfishing that occurred in the Java Sea which resulted in certain types of tuna, skipjack, and mackerel has become difficult to find.⁷ The Ministry of Maritime Affairs and Fisheries said this was due to the widespread use of non-environmentally friendly fishing gear, as well as the increasingly massive growth of fisherman, which disrupted the marine ecosystem. The other problem in the management of marine resources is that land based waste has increasingly been dumped into the sea from time to time. At first, people might think that dumping garbage in the sea will not have an impact on marine ecosystems considering the vast area of the sea, but now in Indonesia alone there are about 1.3 tons of plastic waste dumped in the sea.⁸ This pollution, of course, not only endangers the life of marine ecosystems, but also endangers people living in coastal areas from getting sick.

Another problem with marine economic activities in Indonesia is related to the marine mining process – the most often one that happens every year is oil leak case. For example, in oil mining activities carried out by the Pertamina company in 2019, there was an oil leak in montara by PTTEP, this oil leak caused an oil spill area of approximately 90,000 KM.⁹ Of course this is very dangerous because the oil pollution is toxic and kills a lot of fish and is also dangerous for coastal communities. It is undeniable that these problems are still homework for the Indonesian government to enforce sustainable marine management methods. One way to settle this are by

⁴ Ridho Syukra, “Potensi Ekonomi Maritim Indonesia Capai US\$ 1,5 Triliun Per Tahun” (2021) <<https://investor.id/business/potensi-ekonomi-maritim-indonesia-capai-us-15-triliun-per-tahun#:~:text=Ekonomi%20maritim%20Indonesia%20meliputi%2011,maritim%2C%20dan%20SDA%20non%20konvensional>> accessed May 26, 2021

⁵ *Ibid.*

⁶ *Ibid.*

⁷ Imam Yuda Saputra, “Duh, KKP Sebut Laut Jawa Over-Fishing, Ikan Tongkol Sulit Didapat” (2019) <<https://m.solopos.com/duh-kkp-sebut-laut-jawa-over-fishing-ikan-tongkol-sulit-didapat-1019656>> accessed May 26, 2021.

⁸ Victoria Gill “Mengerikan, sampah plastik sebanyak 1,3 miliar ton akan mencemari lingkungan pada 2040” (*BBC News*, 2020) <<https://www.bbc.com/indonesia/majalah-53522290>> accessed May 26, 2021.

⁹ “Kasus Tumpahan Minyak Montara: 10 Tahun, Satu Gugatan” (2019) <<https://www.voaindonesia.com/a/kasus-tumpahan-minyak-montara-10-tahun-satu-gugatan/5134088.html>> accessed May 26, 2021.

providing the right regulations and other enforcement equipment accordance with applicable regulations that can implemented the blue economy concept.

In 2013, the APEC Summit was held with the theme “Resilient Asia Pacific, Engine of Global Growth” which introduce countries to a collaboration in eradicating poverty in coastal communities and solving marine economic problems that provide protection for the sustainability of resources, which is called the blue economic concept. With the birth of this concept it believes that sustainable development in marine resource management can be achieved, and it is hoped that Southeast Asian countries can solve marine ecosystem management problems. One of the Asia country that have also used the blue economic concept is the People's Republic of China (PR China). Seeing PR China as one of the countries that is actively focusing its maritime economy, as in the last 5 years the maritime economy has provided 10% (ten percent) of GDP to their country.¹⁰ This form of development in the use of the blue economy concept is applied in their technological innovations used in the process of extracting marine resources, such as using environmentally friendly tools and developing a sustainable marine management system. Of course, this is due to the application of environmentally friendly regulations.

This journal will discuss further about the regulations regarding marine economic activities in the two countries, with research questions of how the blue economic concept applied in the marine regulations in Indonesia and PR China, and further to know to what extent does the marine regulations in Indonesia and PR China help on enforcing marine ecosystem sustainability, whether these regulations have succeeded in encouraging the two countries to carry out marine economic activities based on the blue economy concept for the creation of sustainable development.

METHODS

Soekanto explains legal research as a scientific activity based on a particular method which aims to identify a specific legal phenomenon.¹¹ The legal research method that are implemented in this journal uses the normative legal research method, which examines a legal phenomenon from the theoretical, and general explanation aspects related to articles contained in regulations. Normative legal research will examine all aspects of positive law that applies in a country.

This journal use normative methodology as the primary and secondary legal resources and tertiary legal resources as the basis of the analysis. The primary legal source will be based on international conventions, Indonesia regulations, and PR China regulations. The secondary legal sources consist of law journals, law reports, and books. This paper will also focus on the

¹⁰ Payal Bhattar, “Navigating through China’s Blue Economy” (*Wartsila, 2018*) <<https://www.wartsila.com/insights/article/navigating-through-china-s-blue-economy>> accessed May 26,2021.

¹¹ Zaenudin Ali, *Metode Penelitian Hukum* (Sinar Grafika 2010).

comparative analysis on how Indonesia and China implemented the blue economic concepts. The tertiary legal sources are in the form of articles and other information found in the internet.

RESULTS AND DISCUSSION

1. General Theory of Blue Economic Concept

The blue economic concept was first introduced at the United Nation Conference on Sustainable Development (UNCSD) in 2012 or commonly known as “Rio +20”. This conference was attended by all the UN member countries, whereas the topic of the meeting is focused on issues regarding the practice of sustainable development between countries. One of the focus of Sustainable Development Goals (SDGs) is on procedures for implementing a green economy. Green Economy itself is one example of an economy concept with implementing the need for environment based economic development, where it is hoped that with the implementation of this principle, the economic developments in every country will be followed by maintaining and revitalizing environmental ecosystems.¹² As it can be seen from the explanation, the blue economy itself is a form of another embodiment of the principle of this green economy, the difference is that the “blue” economy focuses on empowering marine ecosystems, especially marine resources. This SDGs help to introduce a sustainable development program which is expected to be followed by internal and external cooperation between countries related to environmental empowerment such as reducing waste, even some of the implementation are those related to gender equality in the economic activities.

In this case related to the relationship between countries in Southeast Asia, through the Asian Pacific Economic Community (APEC), there was summit that was held in 2013 as the further discussion about implementation of blue economic, countries discussed the provisions of positive results for the marine sector by implementing this concept, this is mentioned as

“Maintain the health and sustainability of our oceans and coastal resources for the benefit of food security, poverty eradication, preservation of traditional culture and knowledge, conservation of biodiversity and facilitation of trade”

Further, in this case the APEC Summit was made with the aim of improving the economy and interests of coastal communities, and maintaining the health and sustainability of marine resources. The commitment of member countries in implementing this concept is carried out by honoring the policies of each country owned in order to achieve the objectives of ecosystem based business management. Then in 2014, all of this was stated in the fourth APEC Summit meeting in the Xiamen Declaration, which was held in China. In this case, China is actively pushing for the implementation of the blue economy concept because it is closely related to the establishment of an improvement a good sea economy, so trade activities between countries can also increase. To help implementing this concept, there has to be a set of law to regulate and gives

¹² “Green Economy” (UN SDG Platform)

<<https://sustainabledevelopment.un.org/topics/greeneconomy>> accessed June 10, 2021.

strategic plan regarding the economy activities, ensuring this activities to be in line with the blue economic concept.

In Indonesia itself, this concept gave a new motivation at that time through The issued of Law No. 32 of 2014 concerning Marine Affairs (Marine Law 2014) – on the basis of this law, Indonesia emphasizes their stands as a maritime country, and the concept of blue economy is also reflected in Article 2 and Article 4 which stated that the operation of the sea must be based on the principle of sustainability, and the scope of the implementation of Indonesian marine affairs is based on the management of marine space, and the protection of the marine environment. This issuance of Marine Law 2014 help reflecting the blue economy concept as part of a mandatory procedures that must be carry on other marine economic policies. This concept is applied in several matters that become an obligations in marine economic activities, namely the exploitation of marine resources must be carried out with the development of biotechnology or creative technology that can prevent the extinction of marine ecosystems, and develop environmentally friendly technologies.¹³ Other developments that are some of the main points in this regulation are: (1) development of human resources, (2) research in science and technology, (3) marine information and data systems, and (4) marine cooperation.

Indonesia's marine management supposedly not only focused on fisheries sector, energy and mineral resources sector or non-biological resources, it is also focused on coastal resources and small islands. These coastal resources deserve to have attention considering that Indonesia as an archipelagic country has a total about 183 coastal communities,¹⁴ and about 111 small islands. The focus of sustainable development in Indonesia in this aspect of the blue economy is emphasized on economic growth in the fields of fisheries, energy and mineral resources as well as coastal resources. Although, right now Indonesia main focus are more into environmental empowerment, as a result of massive environmental problem carried by the maritime based economic activities.¹⁵ This is different if you look at PR China, where the PR China focuses on implementing the blue concept, but not putting to much attention on the environmental empowerment – but more to their economic development by planning cross-sectoral approaches to the development of coastal areas.¹⁶ Even if PR China still gives motivation and tries to regulate it in their regulation on economic activities, the implementation and enforcement of the environment protection is still unfulfilled. However, if we are talking about their maritime economic development, with no doubt they has successfully planned and achieved it.

¹³ Regulation No. 32 of 2014, Article 26.

¹⁴“The Indonesia Coastal Environment” <[¹⁵ ¶3, Page 3.](https://archive.unu.edu/unupress/unupbooks/80197e/80197E02.htm#:~:text=The%20Indonesia%20coastal%20environment,kilometres%20by%20Soegiarto%20(1976).> accessed June 15, 2021.</p></div><div data-bbox=)

¹⁶ Takeda Jun'ichi “China's rise as a Maritime Power” (*Review of Ocean Policy*) <<https://www.spf.org/islandstudies/research/a00011.html>> accessed June 14, 2021.

Because this concept is related to the development of the marine economy, as well as the protection of the marine environment, the application of this blue economic concept can be found in regulations related to these economic activities, in Indonesia is being regulated under Regulation No. 45 of 2009 on Fisheries Law (Fisheries Law 2009), Regulation No. 32 of 2009 on Environmental Protection and Management (Environmental Protection and Management Law), as well as Presidential Regulation no. 83 of 2018 of Marine Waste Management (Presidential Regulation of Marine Waste Management). In the Fisheries Law, this concept is reflected in fisheries management which is carried out with the principle of sustainability, as well as sustainable development.¹⁷ Referring to the problems that have been described in the background, problems related to the consequences of economic activities in the marine environment in Indonesia such as cases of overfishing have a negative impact on the marine environment, as well as the problem of catching fish using destructive or disruptive tools. This regulation actually has regulates the number of fishing that is allowed and minimum standard of fishing procedures, as well as regarding the cultivation and rehabilitation of the marine environment.

In addition, the Regulation on Environmental Protection and Management also mentions further about sustainable development, which is defined as an effort to integrate environmental, social, and economic aspects into development strategies. Therefore, regarding the process of marine economy activities the Indonesian legal basis has regulated the obligation to protect the environment and ensure the sustainability of marine ecosystems. In this Regulation on Environmental Protection and Management Article 22 has already stated about several obligations of business actors whose carry out their business activities with huge impact on the environment are required to have an environmental impact analysis or AMDAL. The criteria for this are determined from the size of the population that will be affected, the area of distribution, the intensity of the impact, and other criteria. Examples of this AMDAL can be seen in activities for example in oil mining activities at sea, usually having to follow AMDAL requirements, with that intention, if an incident occurs because of the economic activities and pollutes the sea, the company already has a plan on how to deal with the mitigation plan. The Regulation on Environmental Protection and Management also further explained about some sustainable management requirements that business actors must follow regarding their business activities relating to natural resources, where their business process can possibly harm the environment.

Now if we look at PR China which defines the blue economy as the development of the marine economy – they has been successfully carried it out. One of the ways in which China has developed "maritime power" is by regulating regulations related to marine economic activities. The Chinese government is also active in supervising maritime economy activities in its territory to prevent violations of existing regulations. China's activity in regulating the regulation of its

¹⁷ Regulation No. 45 of 2009, Article 2.

marine economy was regulated at the beginning of the year China was founded, where the government focused its maritime economy activities on several things, namely:¹⁸

- a. Marine fishery (establishment of a national fishing corporation and fishing communes)
- b. Coastal salt manufacture (nationalization of salt beds)
- c. Reclamation of coastal wetlands (development of land for state farms)
- d. Marine transportation (requisitioning of the Nationalist-owned China Merchants Steam Navigation Co.; establishment of a deep-sea merchant ship corporation in collaboration with Poland)
- e. Shipbuilding (building of cargo ships in Dalian and Shanghai)
- f. Ports (construction and expansion of new ports at Tanggu in Tianjin and Zhanjiang in Guangdong)
- g. Education (establishment of the Shanghai Fisheries College and other universities)
- h. Scientific research (creation of the Chinese Academy of Sciences' Qingdao Marine Biological Laboratory)

PR China motivation on focusing on their maritime economy has been laid since the end of 1977, on the era Deng Xiaoping (1904-97) where he had established his hold on power and he shifted China's policy course toward reform and opening up.¹⁹ During his power he also build the plan and introduce new foundation through maritime economic for PR China economic development. Other reason why PR China has become aware of their marine economy and other water area are caused by the abolishing of their confrontation with the Soviet Union, where the PR navy which suddenly shifted to offshore fortress or defence.²⁰ Some of the PR China ocean regulations that implemented this blue economic concept are Marine Environmental Protection Law 1982, Fisheries Law 2004 and Regulation on Control Over Dumping Of Waste in The Ocean. Therefore from the history itself we can see how China has improving and focusing their marine economy way before Indonesia does, it's aligned with the blue economic concept, even if the concept was not known until recently. China is also the one who in favor of blue economy concept to be discussed in the APEC meeting on 2014 that also took place in P.R China in Xiamen.²¹

2. The Challenges on Enforcement of Marine Ecosystem Protection

Indonesia and China has several guidelines and regulations regarding the marine economy activities procedures. As it has been explained before, in Indonesia some of the regulations are the Fisheries Act, Marine Act, and also in the Environmental Protection and Management Law,

¹⁸ Takeda Jun'ichi "China's rise as a Maritime Power" (*Review of Ocean Policy*)

<<https://www.spf.org/islandstudies/research/a00011.html>> accessed June 14, 2021.

¹⁹ *Ibid.*

²⁰ *Ibid.*

²¹ "Blue Economy in APEC" (*APEC China, 2014*) <<https://www.pecc.org/resources/next-generation/2126-gm-2014-beijing-new-generation-program-feng-jun/file>> accessed June 15, 2021.

and Marine Waste Management Presidential Regulation. Where in China some of the regulations are Regulation for Protecting Of The Propagation Of Fishery Resources 1979, Marine Environmental Protection Law 1982, Fisheries Law 2004 and Regulation on Control Over Dumping Of Waste in The Ocean. In harmony this regulations gives a guidelines on how individuals or companies should act on their economy in order to maintain a protocols in favor of sustainable development, and if we look further this regulations has already given prevention guidelines and restriction for the most serious threat marine problem in Indonesia and China. In this case, the law aspect help to gives legal certainty to achieve an economy efficiency to reach the blue economy target, one of it are protection of marine environment.

To know to what extent each country implemented this blue economic concept in their marine economic activities based on protection of marine environment, we have to look further into the real life practice examples of marine main problems resulting from their economic activities. Has each country government regulated enough about ocean protection and preservation? If it has, how does each business actor follow this strategy? For example one of the main problem is the scarcity of marine resources or overfishing, or the process of taking fish stocks excessively, to the point where most of the potential food and wealth taken is not being fully utilized.²²

The cause of this overfishing sometimes can be because the use of unsuitable long length fishing nets. This can be really useful in a way that huge amount of fish can be caught, but it may not leaving many fish or other resources left for them to reproduce in order for them to keep life cycle working. Sometimes this method of fishing can catch other marine ecosystem or any other marine living resources that wasn't suppose to be caught, like whales or dolphins.²³ In Indonesia this overfishing case happen because of the use of "kapal pukat cincin" or purse seine, which is a type of vessel use by mostly small fisherman.

The way this purse seine works is by circling an area that is a place of fish with a net, then the bottom of the net is narrowed, so that the fish are collected in the bag.²⁴ In Indonesia this actually has been regulated under the Maritime Law in article 7 where it said that the minister will allocated and number of catches of fishing that is allowed by the government of Indonesia, the type of fisheries gear that is allowed;, types of fish and areas for redistribution and cultivation-based fishing; fish farming and its protection; prevention of pollution and damage to fish resources and their environment; and also. rehabilitation and improvement of fish resources and their environment. On this regulation it has also be stated that management of marine area can be in a form of marine industry, tourism, ocean relation and construction of the ocean.²⁵ This means

²² Ulrike and Ray Hillborn, "Overfishing" (Oxford University Press, 2012).

²³ "Over-fishing, a global depletion of fish stocks"

<<https://sites.google.com/site/overfishingglobaldepletion/unsustainable-fishing-practices>> accessed June 15, 2021.

²⁴ Steffano Sulaiman, "Penggunaan Pukat Cincin Akan Diatur"

<<https://money.kompas.com/read/2015/03/06/133748626/Menteri.Susi.Penggunaan.Pukat.Cincin.akan.Diatur>> Accessed June 15, 2021.

²⁵ Regulation No. 32 of 2014, Article 14.

the way Indonesia solves this overfishing problem is from allocating the number of fish that can be catch in one fishing time.

Further, on Article 9 of the Maritime Law it has been said that it has been prohibited to even owning, controlling, carrying, and/or using fishing gear and/or fishing aids that interfere with and damage the sustainability of fish resources, violation of this can be given a criminal sanction resulted in with a maximum imprisonment of 5 (five) years and a maximum fine of Rp2,000,000,000.00 (two billion rupiah),²⁶ and if this is done by small fishermen or small cultivators, they can be subject to a maximum fine of Rp100,000,000. So it can be seen that this is an obligation that binds the related parties, and the criminal sanctions are also specifically regulated. In spite of that, Indonesia's overfishing problem still can not be solved just through the regulations, since the root of the problem itself is how the fishing management in Indonesia is still poor. Many water area of Indonesia such as Sumatera, Java, and Selat Bali is still heavy on over exploitation since there are no enforcement or legal body to help securing this problem.²⁷

PR China has also implemented the same solution for their overfishing problem, which is stated in the Article 22 of their Fisheries Law 2004 which is called as the quota system for fishing that shall be determined by their administrative department for fisheries under the state council. The difference between Indonesia and PR China on this quota or allocating fishing number that is allowed is that in PR China each zones or areas of their territorial seas has their own quota numbers as PR China has been known to be very active in distributing their sea areas. But sadly in the real case this quota system has never been implemented because there are some hardship with the data, or the oversight of fish trade.²⁸

In PR china this overfishing problem has been neglected since 1995, usually this happens because of the coastal fisherman freely fishing. This can be seen from they're annual coastal fishing catch has always been over 10 million ton, in 2016 for example it almost reached 14 Million above the level recommended by the expert,²⁹ resulting the fish in their ocean area becoming much smaller and younger. But now the government has tried to enforce more of this regulation by providing managers and officials on the port for monitoring equipment at the harbour, so this official can let the fishing boat to go directly to the management system to know what they have caught or purchase³⁰. But even that this solution is still hard to be implemented since the technology for running this up is expensive and hard to use.

²⁶ Regulation No. 45 of 2009, Article 85.

²⁷ Kementrian BPN/Bappenas, "Bab 6, Isu Strategis Dan Permasalahannya" [2018] ISU STRATEGIS DAN PERMASALAHANNYA .

²⁸ Zhang Chun, "China Implements Port-Based Controls to Fight Overfishing" (2021) <<https://www.maritime-executive.com/editorials/china-implements-port-based-controls-to-fight-overfishing#:~:text=Since%201995%2C%20China's%20annual%20coastal,a%20result%20of%20this%20overfishing>> accessed June 5, 2021.

²⁹ *Ibid.*

³⁰ *Ibid.*

Another major problem and one of the most important is regarding the ocean wastes, which has already become a worldwide issue – not just wastes that came from the ocean but mostly are the wastes that came from the land or other economic activities, such as tourisms. Economic activities or just house wastes get thrown daily into the ocean area. Many types of the wastes are varied, from plastics, paper, woods, even chemical wastes.³¹ Not only this is threatening to the people who worked in the marine sectors, it's also very dangerous for marine wildlife and their food chains.³² Mostly the plastic waste problems also bring another challenges to both Indonesia and China, since both countries has known for being the most contributor of plastic waste in the ocean in 2016. For PR China this may be because they're the country that is known for plastic manufacturing.³³ Plastic has become very much the center of attention these recent years because mostly 60-80% (sixty to eighty percent) of plastic wastes can be found in the marine environment, plastic is also considered to be the most harmful materials in the ocean, because type of plastic can be very abundant and persistent.³⁴ The use of plastic is driven from the basic need for many businesses, such as fish aquaculture, packaging of goods and services, personal care products, tourism trash such as plastic cups, or even for constructions.³⁵

The fact that PR China is very active on their aquaculture economic sector is might also the reason why their plastic waste is immensely high. PR China is one of the world's top fish producers, they have even contributed around 62% to the fish production since 2015.³⁶ Hence, they're also the world's largest exporter of fish and fisheries products, their exports revenue reach over USD 19.7 Billion in 2015.³⁷ Despite the problem of this, China still doesn't have strict legal basis or regulations that in purpose of plastic waste. The Marine Environmental Protection Law of PR China only regulated the wastes that came from the construction projects (such as harbour or oil terminal construction),³⁸ Oil exploration and exploitation,³⁹ vessels pollution (such as oils or other harmful substances because of the vessels),⁴⁰ and dumping of wastes,⁴¹ and lastly

³¹ Samuel Abalansa, *et.al.*, "The Marine Plastic Litter Issue: A Social Economic Analysis" (MDPI 2020)

³² *Ibid.*

³³ Laura Parker, "US Generates more plastic trash than any other nation, report finds" <<https://www.nationalgeographic.com/environment/article/us-plastic-pollution>> accessed June 17, 2021.

³⁴ *Ibid.*

³⁵ *Ibid.*

³⁶ "Fishery and Aquaculture Country Profiles

The People's Republic of China" (FAO)

<<http://www.fao.org/fishery/facp/chn/en#:~:text=China%20has%20been%20the%20world's%20top%20fish%20producer%20for%20many%20years.&text=Chinese%20aquaculture%20is%20much%20more,food%20fish%20production%20in%202015.>> accessed June 10, 2021.

³⁷ *Ibid.*

³⁸ The Marine Environmental Protection Law, Article 6.

³⁹ *Ibid.*, Article 10.

⁴⁰ *Ibid.*, Article 26.

⁴¹ *Ibid.*, Article 38.

the land based pollutants⁴². The land based pollutants in this regulations mostly said to be the type of chemicals pollutants, such as medical waste or industrial waste that came from the sewage. It also stated that about “garbage” but this articles does not explain what is included in the garbage criteria. In the article about dumping of wastes is also did not explain what is actually the criteria of “wastes”. Therefore, there are still a lot of gray area if were talking about the wastes definitions in the PR China regulations.

But recently in the end of 2020 China National Development and Reform Commission and the Ministry of Ecology and Environment has announced a new regulation about plastic bans until 2025 this include restriction and also prohibitions, the criminal sanction of breaching this regulation is in a form of fine penalty of around 10,000 to 100,000 Yuan.⁴³ One example of a successful ecommerce business in PR China that has become aware of implementing a sustainable development as their business is the platform call “Meituan Dianping”, which is a PR China Company that aspire to be the biggest service platform in China. They implemented sustainable development by being the making an environmental value chain for takeaway delivery and upgrade of the packaging recycling industry.⁴⁴

In Indonesia itself, plastic wastes also have been one of the biggest crisis – both in land or in the oceans. Indonesia has been said to produces 6.8 Million tons of plastic waste per year, and only 10% if this waste actually being recycled.⁴⁵ One of the regulations regulating specifically for this plastic waste is on the Presidential Regulation on Marine Waste Management. It has been said on article 1 that Marine Pollutions are “Entrance of any organism, substance, energy, and other components into the ocean ecosystem that is caused by human activities that results in a seawater quality standard that is lower than the set limit”.

In the Article 1 Paragraph 4 it also been stated that “Plastic waste is a waste that contain polymer compound” – that’s why plastic waste falls under the category of marine pollutants. This regulation has also stated a national action plan on marine waste management for 2018 until 2025, this action plan made by the ministry through providing strategies for all the businesses and overall citizens of Indonesia to gain awareness regarding marine waste, land based waste management, legal enforcement and also development of this strategy.⁴⁶ This regulation also pointed a National Coordination Team for Marine Waste Management.⁴⁷ Same as PR China but

⁴² *Ibid.*, Article 18.

⁴³ Herbert Smith Freehills, “Single use plastics in China: an evolving landscape for downstream participants” <[⁴⁴ *Ibid.*](https://www.lexology.com/library/detail.aspx?g=59a44161-9d5b-4464-ab3f-95523feb9609#:~:text=Regulatory%20Landscape&text=China%20has%20also%20announced%20a,cities%20and%20to%20owns%20by%202022.> Accessed June 18, 2021.</p></div><div data-bbox=)

⁴⁵ Muh. Ibnu Aqil, “Ineffective recycling compounds Indonesia’s marine waste problem” <[⁴⁶ Presidential Regulation No. 83 of 2018, Article 2.](https://www.thejakartapost.com/news/2020/05/10/ineffective-recycling-compounds-indonesias-marine-waste-problem.html> accessed June 19, 2021.</p></div><div data-bbox=)

⁴⁷ *Ibid.*, Article 4.

much more flexible, Indonesia has also tried to reduce plastic use by giving tax in using plastic bags,⁴⁸ where in Bali they also have banned all single use of plastic since 2018, and this followed by the capital city of Indonesia, Jakarta has also banned the single use plastic bags on 2020.⁴⁹ But the same problem is still occur regarding the enforcement of this is still not very that favorable by the citizens and the businesses. This regulation does not provide strict sanction to the violations of the strategy.

If we looked further into the Environmental Protection and Management Law it can be seen that this regulation also mentions about wastes and wastes management, on the land and on the ocean as it has been explained before, this regulation actually give legal certainty for businesses to follow the requirements of an Analysis on Environmental Impact or known as AMDAL as it has been explained before. This is important in matter of giving legal certainty for businesses to especially oil exploration and exploitation to follow in order to prevent the cases of environmental damage because of the activity, and to have specific strategy if in the future it may happen an oil leakage then the businesses already anticipated and know where or what kind of strategies they have to do to prevent it from ruining more of the ocean area. But even if this already regulated some real cases regarding oil leakage in Indonesia shown that this AMDAL strategy is not being followed by some companies, such as the case that happen in 2019 of PT Pertamina Hulu Energi on Offshore in North West Java, where one of the m are oil pipe exploded resulting oil leakage polluting the ocean area and coastal area for around 400.000 meter cubic.⁵⁰ The PT Pertamina is slowed on this matter for overcoming this oil leakage problem, as the explosion already happened on July 12 2019, but PT Pertamina took action on July 18 2019, therefore the impact of the oil leakage has already spread wider than it should be. PT Pertamina seems during that time doesn't have a comprehensive plan on treating possible oil leakage case in their AMDAL, even though the government has already stated in the regulations.

3. The Legal Urgency on Implementation of Marine Ecosystem and Environment Protection

As it can be seen from this explanation both Indonesia and China still has challenges in the enforcement part of environmental protection resulted from the economy activities related to the marine activities. Both countries still trying to implement the blue economy concept, as a balance of environmental protection and improvement of economy based on the resources in the marine is quite a complex to be achieve. However, since PR China blue economy is focusing more on the coastal improvement and economy activities, they have been more successful on

⁴⁸ Ulya Yasmine Prisantani and Adzhana Luthfia Amanda, "The Importance of Regulating Plastic Marine Pollution for the Protection of Indonesian Marine Environment", (Yuridia, Vol 35, No 1, January 2020).

⁴⁹ Clay Hallee, "Leaders Tackle Plastic Waste in Indonesia" <<https://borgenproject.org/plastic-waste-in-indonesia/>> accessed June 19, 2021.

⁵⁰ Anisatual Umah, "Duh, pipa Minyak di Karawang Bocor Lagi Kata Pertamina" <<https://www.cnbcindonesia.com/news/20210420181832-4-239378/duh-pipa-minyak-di-karawang-bocor-lagi-ini-kata-pertamina>> accessed June 22, 2021.

that matter than Indonesia. This can be concluded from their ocean economy resulted by being the source for 33.5 million jobs, and how their effort on giving stricter and clearer plans regarding blue economy. As it can be seen China since 2011 has made a specific ocean area for blue economic zones called The Shandong Peninsula Blue Economic Zone Development Plans that is part of the Chinese State Council Programme.⁵¹

This zones if one of the first specific area for China regional development on marine economy, as this area contain the world most leading education center of marine science, a zone for pilot in the national marine economic reform, and marine ecological strategy. Other zones that implemented their visions on marine economic innovation are Blue Sillion Valley, which is known for a town that is establishing a marine science and technology improvement, for example such as an incubator center for marine achievement, modern healthcare and center for blue tourism. Hence, that's why china technology is also known for the most high tech.

On 2018 at the Yangtze Delta Region PR China also implemented a marine industrial parks in orde with the regional strategic cooperation which are being divided into 5 parks bases in Nantong, Zhoushan, Shanghai Pudong, and Ningbo, this parks are being made in purpose to help manage and facilitate the development of marine industry or any other industrial project, and to help the improvement of innovations in science, by collaborating with colleges, university, or any other institutes in order to find people or students that are interested in marine, this program gave some special center for deepening the talents that this people or students have, with the help of the marine talents.⁵² PR China also already have four existing organs for marine enforcement to help safeguarding the marine environment and PR China Maritime interest, namely are the China Marine Surveillance, China Coast Guard (under ministry of public security), Fisheries Law Enforcement Command (under ministry of agriculture), and Anti-smuggling Bureau (under general Administration of customs).⁵³ Even if PR China still have not achieve a great marine environmental protection, they have at least do maximizing their marine based activities as a big part of their state's income, by making an extensive strategic plans and regulations to provides a framework to help the enforcement of those economic plans.

This become a new highlight for Indonesia government to make more stricter strategies in order to elevated the marine based economic activities, since PR China has proved it and gives a great example on how maritime country like them can be successful by focusing on the marine development, Indonesia has so much potential to be as great as that. Since in this era of COVID-19 the trades and economic industry based on the land has been decreased, Indonesia can gives much attention to their marine activities with better plans and strategies such as dividing the ocean area specifically for blue economic zones, or giving awareness to the people of Indonesia

⁵¹ Lu Wenhai, et.al., (Review Article) "Successful Blue Economy Examples With an Emphasis on International Perspectives"

<<https://www.frontiersin.org/articles/10.3389/fmars.2019.00261/full>> accessed June 20, 2021.

⁵² *Ibid.*

⁵³ Takeda Jun'ichi, "China's Rise as a Maritime Power" (*Review of Ocean Policy*)

<<https://www.spf.org/islandstudies/research/a00011.html>> accessed June 21,2021.

especially for the coastal area peoples about the importance of protecting the ocean. This has been explained in the Maritime Law 2014 on article 70 about the importance of community role in participating on preserving the maritime environment based on the cultural values and maritime insights, as well as revitalizing customary law and local wisdom in the marine sectors and protecting and socializing the cultural heritage of the ocean through preservation, restoration, and conservation efforts.

CONCLUSION

Indonesia and China have different approaches on implementing the blue economy concept. While Indonesia main focus is on the sustainability development,⁵⁴ China put their focus more on the enhancement of marine resources economy. This concept applied in both countries' marine regulations, In Indonesia it has been implemented on the Fisheries Law 2009, Marine Law 2014, and Regulation on Control Over Dumping Of Waste In The Ocean 1985. While in China this is implemented on Marine Environmental Protection Law 1982, Fisheries Law 2004 and Regulation on Control Over Dumping of Waste in The Ocean. Both countries have regulated the essence of blue economic principles as the international legal basis on blue economy (Rio20+ and APEC) has stated, which in the end, the main goal of this concept is on enhancement of economy, but still incorporating sustainability on the activities. China did have much more upper hand on this since they have stricter frameworks and regulations, also further help from the enforcement body. There are still some homework for the government of Indonesia to raise their marine economy with all the problems arises, since one of the blue economic aspect that Indonesia wants to focus on which regarding marine ecosystem protection are still not 100% achieve. The regulatory frameworks already tried to gives standard legal base but there still a need for strategic plans on implementing it in real practice. Further, there are still challenges for both countries to actually solve their marine problems, since 2016 until report on 2019 PR China and Indonesia has been runner up country in the world with the largest contributor of marine plastic pollution.⁵⁵

In the end, even though the regulations on PR China and Indonesia has tried to gives a descriptive regulations on preserving the ocean to gives a legal certainty and to help the enforcement of it, it is still hard to implement it into real life practice without common empathy and awareness of the citizens in both countries, and a governing legal body to help securing this problem to enforce the law. Indonesia and PR China need a more strict and detailed set of regulations on the matter of ocean preserving, and in need of a main body enforcement, not just focusing on the economy process but also the after care for the ocean habitat. Furthermore, for Indonesia with the wide range of ocean area, the government can learn on how PR China

⁵⁴ Regulation No. 32 of 2014, Article 3.

⁵⁵ Ulya Yasmine Prisantani and Adzhana Luthfia Amanda, "The Importance of Regulating Plastic Marine Pollution for the Protection of Indonesian Marine Environment", (Yuridia, Vol 35, No 1, January 2020).

improved their GDP and economy through marine strategic planning, since this will be a great potential for Indonesia.

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